KHPL 0030187

JOINT MESSAGEFORM

SECURITY CLASSIFICATION [redacted]

[redacted] RVED FOR COMMUNICATION

2 X VIII

PRECEDENCE	TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
ACTION	BOOK	MULTI	SINGLE			
INFO						

FROM:
6595TH AEROSPACE TEST WING, VANDENBERG AFB, CALIF., VWZD-30-7-34

SPECIAL INSTRUCTIONS

TO:
SPACE SYSTEMS DIV, LOSA, CALIF.

SUBJECT: EIGHT-HOUR FLASH REPORT [redacted]

I. SUMMARY

A VEHICLE CONSISTING OF SLV-2A BOOSTER NO. 382 AND S-01A ORBITAL STAGE NO. 1167 WAS LAUNCHED ON THE FIRST ATTEMPT FROM VAFB COMPLEX 75-1, PAD 2, AT 17:0026.63 PDT, ON 30 JULY 1963. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE S-01A SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT WAS ACCOMPLISHED. THE VTS RADAR PLOTBOARD INDICATED NEAR-NOMINAL ASCENT CONDITIONS UP TO THE TIME OF VERLORT LOSS OF VEHICLE TRACK APPROXIMATELY 11 SEC PRIOR TO S-01A ENGINE SHUTDOWN. THE ORBITAL PERIOD APPEARS TO BE NEAR-NOMINAL, BASED ON FIRST PASS ACQUISITION [redacted]

DATE	TIME
30 JUL	2300
MONTH	YEAR

WRITER

SYMBOL [redacted]

TYPED NAME AND TITLE (Signature, if required)
Maj. F. L. Wright, USAF

PHONE 866-3771 | PAGE NR. 1 | NR. OF PAGES

SECURITY CL[redacted]

SIGNATURE

TYPED (or stamped) NAME AND TITLE

READER

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II. SIGNIFICANT EVENTS

1. PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF (1700:26.63 PDT) (System Time 00026.63)	ZERO	
WEB BURNOUT ON SOLID MOTORS	87.3 TO 27.6	SEC
SOLID MOTOR THRUST TERMINATION	40 TO 41	SEC
SOLID MOTOR JETTISON	70.2	SEC
STEERING INITIATED	92.37	SEC
STOP STEERING	146.68	SEC
MECO (LOX DEPLETION)	150.07	SEC
S-1 COMMAND	150.21	SEC
VECO	159.09	SEC
SEPARATION COMMAND [redacted] (S-2)	163.45	SEC
SEPARATION COMPLETE	165.83	SEC
ULLAGE ROCKET IGNITION	167.92	SEC
S-01A ENGINE IGNITION	170.92	SEC
S-01A THRUST ATTAINMENT (90 PERCENT PC)	172.09	SEC
BEGIN S-01A STEERING	182.4	SEC
DOWN RANGE SHIP BEACON ACQUISITION	230.5	SEC
END S-01A STEERING	346.55	SEC
ENABLE S-01A VELOCITY METER	347.83	SEC
VTS VERIORT RADAR FADE	400	SEC

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S-01A ENGINE SHUTDOWN (VELOCITY METER)	410.89	SEC
VTS ACQUISITION BEACON FADE	427	SEC
VTS TELEMETRY DATA FADE (LINK 1)	438	SEC
VTS TELEMETRY SIGNAL STRENGTH FADE (LINK 2)	450	SEC
VERLORT RADAR PASS IVE	477	SEC

III. SLV-2A PERFORMANCE

ALL SLV-2A SUB-SYSTEMS PERFORMED ADEQUATELY FOR ACHIEVEMENT OF THE PRIMARY TEST OBJECTIVES, HOWEVER MECO OCCURRED BY LOX DEPLETION WITH APPROXIMATELY 800 LB OF FUEL REMAINING. THIS REPRESENTS AN UNUSUALLY LOW PROPELLANT UTILIZATION AND WOULD BE EXPECTED TO RESULT IN A VELOCITY DEFICIENCY AT MECO. THE MAGNITUDE OF THIS DEFICIENCY IS NOT AVAILABLE FOR THIS REPORT, BUT A PRELIMINARY EVALUATION OF THE ORBITAL STAGE VELOCITY GAIN INDICATES THAT THE SLV-2A DEFICIENCY WAS WITHIN THE RANGE OF 150 TO 200 FPS.

IV. COMMAND GUIDANCE

PERFORMANCE OF THE COMMAND GUIDANCE SYSTEM APPEARS TO HAVE BEEN SATISFACTORY. MECO WAS DUE TO PROPELLANT DEPLETION. [redacted]

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SUBSEQUENT GUIDANCE COMMANDS AND RESERVE S-01A THRUST CAPABILITY COMPENSATED FOR THE SLV-2A VELOCITY DEFICIENCY. QUICK LOOK EVALUATION OF TRAJECTORY VECTOR AT GUIDANCE TERMINATION PREDICTED FOLLOWING VALUES: INJECTION ALTITUDE OF 97.501 NM (NOMINAL: 97.48 NM), INJECTION FLIGHT PATH ANGLE OF 0.42 DEG (NOMINAL: 0.58 DEG), ORBITAL PERIOD OF 91.194 MIN (NOMINAL: 90.72 MIN), AND ORBITAL INCLINATION ANGLE OF 74.789 DEG (NOMINAL: 74.982 DEG.). ORBITAL PERIOD REPORTED AFTER THE FIRST PASS WAS SAME AS NOMINAL.

V. S-01A PERFORMANCE

ALL S-01A VEHICLE SUB-SYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE TRAJECTORY CONDITIONS FOR ORBITAL INJECTION AT ENGINE SHUTDOWN. CONTROL GAS CONSUMPTION OF APPROXIMATELY 8 LBS DURING THE THRUST INTERVAL WAS HIGHER THAN EXPECTED. A ROLL GYRO OFFSET OF APPROXIMATELY 2.5 DEG WAS REQUIRED TO SIGNAL CONTROL TORQUE TO COUNTERACT AN EXTRANEOUS ROLL TORQUE WHICH WAS APPARENTLY ASSOCIATED WITH EXHAUST STACK MISALIGNMENT. AT THE TIME OF TELEMETRY SIGNAL FADE AT VTS, THE ORBITAL TIMER WAS SET AT 5440 SEC (STEP 2631 IN THE RESET-ON POSITION IN THE DECREASE MODE).

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AND RE-ENTRY DISABLE POSITION.

VI. SPACE-GROUND COMMUNICATIONS

TELEMETRY DATA FROM ALL LINKS WERE SATISFACTORILY RECEIVED AND RECORDED.

BEACON INTERROGATION BY THE DOWN RANGE SHIP WAS OBSERVED BY VERLORT FROM 430.5 TO 400 SEC. THE VERLORT ANIII BEACON CAPTURE UNIT PERFORMED SATISFACTORILY AND PERMITTED CONTINUOUS VEHICLE TRACK UNTIL HORIZON SIGNAL FADE.

VII. COUNTDOWN

THE COUNTDOWN WAS INITIATED AT 0755 PDT ON 30 JULY 1963 AND PROCEEDED TO LIFTOFF AT THE BEGINNING OF THE SCHEDULED LAUNCH TIME "WINDOW". NO HOLDS WERE IMPOSED.

A PORTION OF TASK 6 WAS REPEATED TO VERIFY OPERATION OF S-01A LINK II TELEMETRY. ALSO IN TASK 6, THE S-01A ACCELEROMETER OVEN TEMPERATURE LANDLINE MONITOR GAVE AN ABNORMAL INDICATION. ADJUSTMENT OF AN AMPLIFIER IN THE PAD ELECTRICAL TRAILER ELIMINATED THE PROBLEM.

TASK 8 WAS EXTENDED 133 MIN DUE TO LACK OF PMR SUPPORT WHICH WAS REQUIRED BY ANOTHER LAUNCH OPERATION.

IN TASK 9 THE S-01A PITCH GYRO DRIFT RATE WAS BEYOND

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ESTABLISHED LIMITS, BUT WAS WITHIN THE WIDER LIMITS FOR GYRO DRIFT RATE WHICH HAS BEEN TENTATIVELY APPROVED. ALSO, IN TASK 9, THE PAYLOAD BLANKET TEMPERATURE WAS BELOW LIMITS DUE TO LACK OF PROPER AIR CONDITIONING. THE AIR CONDITIONING DUCT TO THE S-01A VEHICLE AND THE DUCT TO THE PAYLOAD WERE INTERCHANGED TO PROVIDE IMPROVED AIR CONDITIONING TO THE PAYLOAD.

IN TASK 16 LMSC PERSONNEL WERE SENT TO THE PAD TO ADJUST AN AGE FUEL PRESSURE REGULATOR.

VIII. AEROSPACE GROUND EQUIPMENT (AGE)

THE AGE PERFORMED SATISFACTORILY TO SUPPORT CHECKOUT AND LAUNCH OF THE VEHICLE WITH THE FOLLOWING EXCEPTIONS:

1. IT WAS NECESSARY TO SWITCH TO THE VP-45 AIR CONDITIONER TO MAINTAIN PAYLOAD TEMPERATURE WITHIN LIMITS.

2. AN AMPLIFIER IN THE PAD ELECTRICAL TRAILER REQUIRED ADJUSTMENT TO PROVIDE A PROPER INDICATION OF THE S-01A ACCELEROMETER OVEN TEMPERATURE.

3. AN AGE FUEL PRESSURE REGULATOR REQUIRED A MINOR ADJUSTMENT.

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IX. PAD DAMAGE

PAD DAMAGE WAS NORMAL EXCEPT FOR DAMAGE CAUSED BY AN AFTER-FIRE IN THE LOWER PORTION OF THE MAST. ELECTRICAL CABLES AND DUCTING IN THE LOWER PART OF THE MAST WILL REQUIRE REPLACEMENT. REHABILITATION CAN BE ACCOMPLISHED WITHIN THE SCHEDULED TURNAROUND TIME.

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